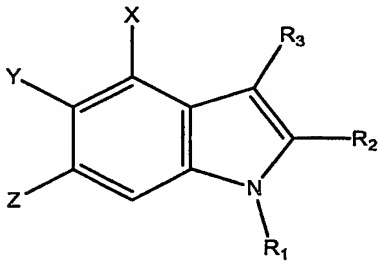
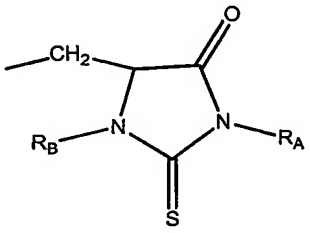
WHAT IS CLAIMED IS:

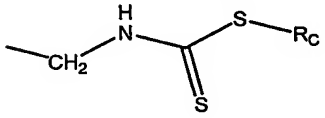
1. A compound having indoleamine 2,3 dioxygenase (IDO) inhibitory activity, said compound having a formula selected from the group consisting of formula (I):



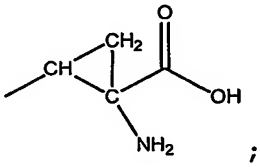
, wherein R_1 is H or lower alkyl; R_2 is H; R_3 is selected from the group consisting of: (a)



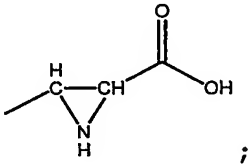
, wherein R_A and R_B are independently selected from the group of H and hydrocarbyl; (b)



, wherein R_C is selected from the group of H and hydrocarbyl; (c)

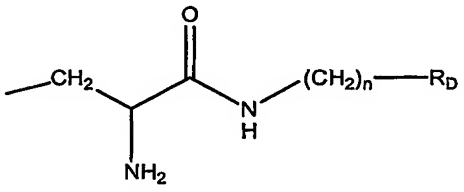


; (d)

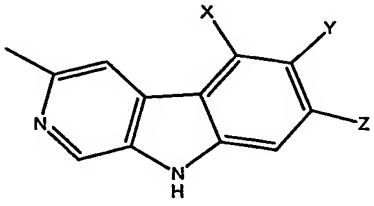


;

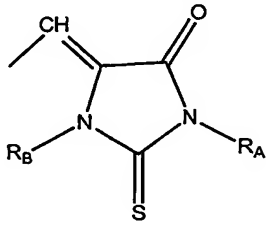
(e)



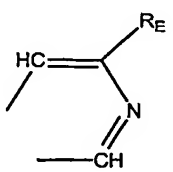
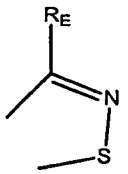
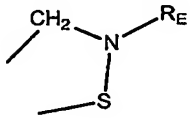
, wherein n is a whole number from 1 to 10 and R_D is a carboline substituent of the formula:

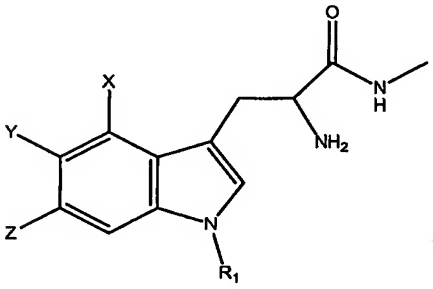


; and (f)



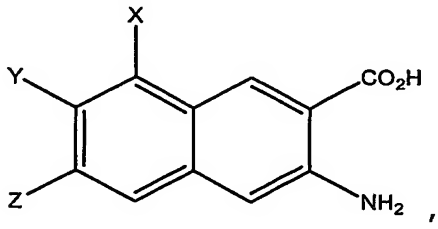
,

wherein R_A and R_B are independently selected from the group of H and hydrocarbyl; or R_2 and R_3 are joined together and represent part of a ring which is fused to the pyrrole moiety of formula (I) and which is selected from the group of:  (i),  (ii), and  (iii), wherein R_E is a hydrocarbyl or alkyl-Q, Q representing a substituent of the formula:



, the compound of formula (I) being a β-carboline derivative when R_2 and R_3 joined together represent (i), a brassilexin derivative when R_2 and R_3 joined together represent (ii), and an N-substituted brassilexin derivative when R_2 and R_3 joined together represent (iii); X, Y, and Z may be the same or different and are selected from the group consisting of H, halogen, NO_2, and hydrocarbyl; and when R_2 and R_3 are joined together and represent part of a ring system, Y may also be isothiocyanate; with the proviso that formula (I) does not include a compound selected from the group of: 3-(N-methyl-thiohydantoin)-indole, 3-(N-phenyl-thiohydantoin)-indole, 3-(N-allyl-thiohydantoin)-indole, 5-methyl-brassinin, brassinin, brassilexin, β-carboline, 3-butyl-β-carboline, 6-fluoro-3-carbomethoxy-β-carboline, 6-isothiocyanate-3-carbomethoxy-β-carboline, 3-propoxy-β-

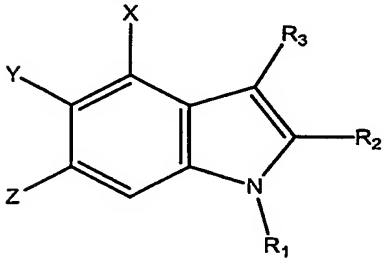
carboline, 3-carboxy-β-carboline, 3-carbopropoxy-β-carboline, and 3-carbo-tert-butoxy-β-carboline; and

formula (II): 

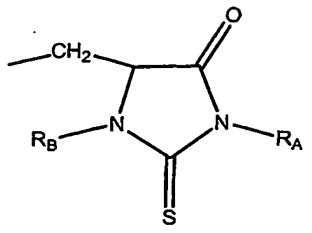
, wherein X, Y, and Z may be the same or different and are selected from the group consisting of H, halogen, NO_2, and hydrocarbyl; and with the proviso that formula (II) does not include 3-amino-2-naphthoic acid.

2. A pharmaceutical composition for the treatment of cancer comprising an effective amount of the compound of claim 1 and a pharmaceutically acceptable carrier medium.

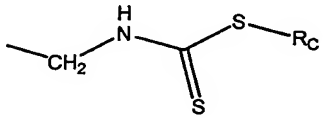
3. A method for the treatment of cancer in a patient in need of such treatment comprising administering an effective amount of a pharmaceutical composition comprising at least one indoleamine 2,3-dioxygenase (IDO) inhibitor, said at least one IDO inhibitor being selected from the group of compounds having the formula (I):



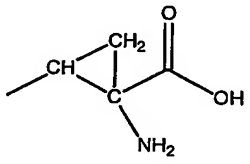
, wherein R_1 is H or lower alkyl; R_2 is H; R_3 is selected from the group consisting of:



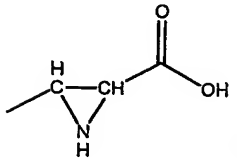
(a), wherein R_A and R_B are independently selected from the group of H and hydrocarbyl;



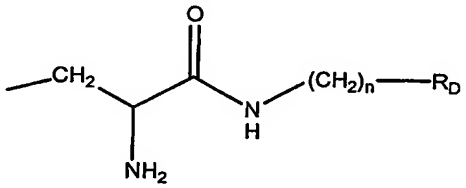
(b), wherein R_C is selected from the group of H and hydrocarbyl;



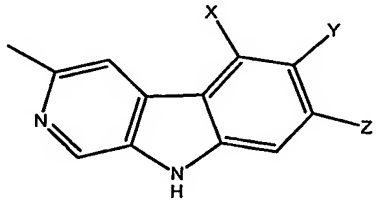
(c);



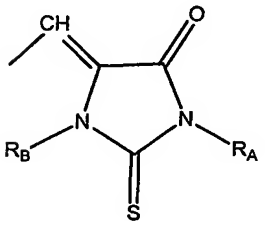
(d);



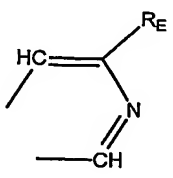
(e), wherein n is a whole number from 1 to 10 and R_D is a carboline substituent of the formula:



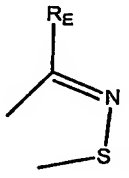
; and (f)



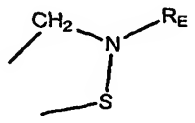
, wherein R_A and R_B are independently selected from the group of H and hydrocarbyl; or R_2 and R_3 are joined together and represent part of a ring which is fused to the pyrrole moiety of formula (I) and which is selected from the group of:



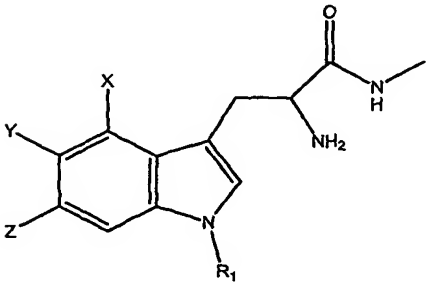
(i),



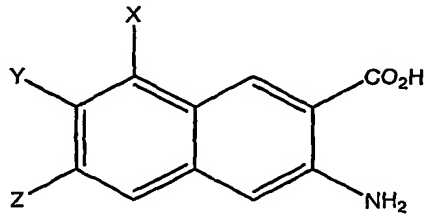
(ii), and



(iii), wherein R_E is a hydrocarbyl or alkyl-Q, Q representing a substituent of the formula:



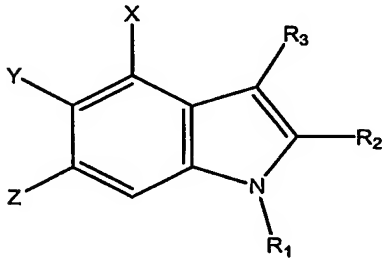
, the compound of formula (I) being a β-carboline derivative when R_2 and R_3 joined together represent (i), a brassilexin derivative when R_2 and R_3 joined together represent (ii), and an N-substituted brassilexin derivative when R_2 and R_3 joined together represent (iii); X, Y, and Z may be the same or different and are selected from the group consisting of H, halogen, NO_2, and hydrocarbyl; and when R_2 and R_3 are joined together and represent part of a ring system, Y may also be isothiocyanate; with the proviso that formula (I) does not include a compound selected from the group of: 3-(N-methyl-thiohydantoin)-indole, 3-(N-phenyl-thiohydantoin)-indole, 3-(N-allyl-thiohydantoin)-indole, 5-methyl-brassinin, brassinin, brassilexin, β-carboline, 3-butyl-β-carboline, 6-fluoro-3-carbomethoxy-β-carboline, 6-isothiocyanate-3-carbomethoxy-β-carboline, 3-propoxy-β-carboline, 3-carboxy-β-carboline, 3-carbopropoxy-β-carboline, and 3-carbo-tert-butoxy-β-carboline; or

formula (II):  , wherein X, Y, and Z may be the same or different and are selected from the group consisting of H, halogen, NO_2, and hydrocarbyl; and

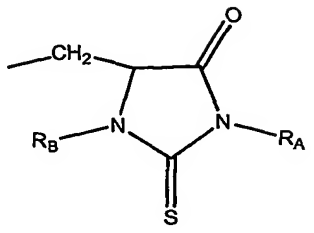
with the proviso that formula (II) does not include 3-amino-2-naphthoic acid.

4. The method of claim 3, wherein said cancer is selected from the group consisting of cancers of the prostate, colorectum, pancreas, cervix, stomach, endometrium, brain, liver, bladder, ovary, testis, head, neck, skin (including melanoma and basal carcinoma), mesothelial lining, white blood cell (including lymphoma and leukemia) esophagus, breast, muscle, connective tissue, lung (including small-cell lung carcinoma and non-small-cell carcinoma), adrenal gland, thyroid, kidney, or bone; glioblastoma, mesothelioma, renal cell carcinoma, gastric carcinoma, sarcoma, choriocarcinoma, cutaneous basocellular carcinoma, and testicular seminoma.

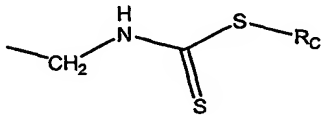
5. A method for treating a cancer in a patient in need thereof comprising administering to said patient, concurrently or sequentially, an effective amount of at least one indoleamine 2,3-dioxygenase (IDO) inhibitor and at least one signal transduction inhibitor (STI), wherein said at least one IDO inhibitor is selected from the group of compounds having the formula of formula (I):



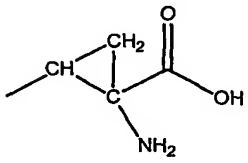
, wherein R_1 is H or lower alkyl; R_2 is H; R_3 is selected from the group consisting of:



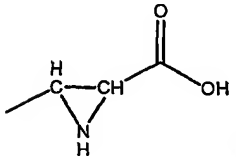
(a), wherein R_A and R_B are independently selected from the group of H and hydrocarbyl;



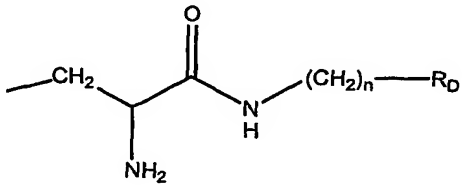
(b), wherein R_C is selected from the group of H and hydrocarbyl;



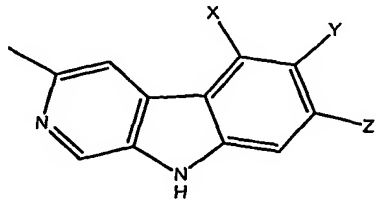
(c);



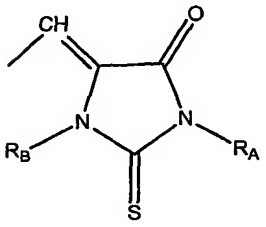
(d);



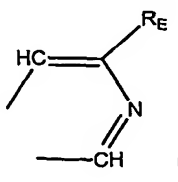
(e), wherein n is a whole number from 1 to 10 and R_D is a carboline substituent of the formula:



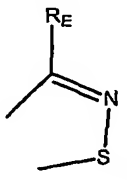
; and (f)



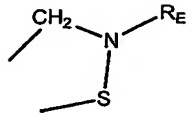
, wherein R_A and R_B are independently selected from the group of H and hydrocarbyl; or R_2 and R_3 are joined together and represent part of a ring which is fused to the pyrrole moiety of formula (I) and which is selected from the group of:



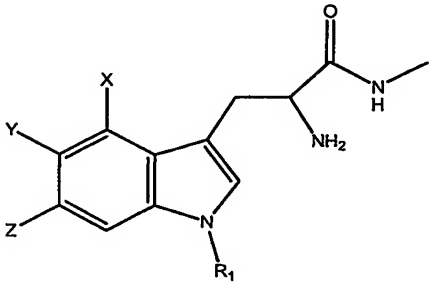
(i),



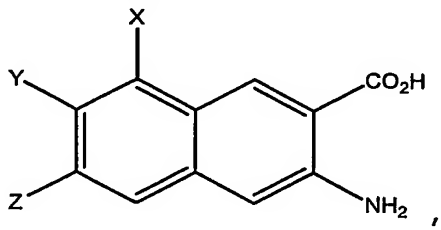
(ii), and



(iii), wherein R_E is a hydrocarbyl or alkyl-Q, Q representing a substituent of the formula:



, the compound of formula (I) being a β-carboline derivative when R_2 and R_3 joined together represent (i), a brassilexin derivative when R_2 and R_3 joined together represent (ii), and an N-substituted brassilexin derivative when R_2 and R_3 joined together represent (iii); X, Y, and Z may be the same or different and are selected from the group consisting of H, halogen, NO_2, and hydrocarbyl; and when R_2 and R_3 are joined together and represent part of a ring system, Y may also be isothiocyanate; with the proviso that formula (I) does not include a compound selected from the group of: 3-(N-methyl-thiohydantoin)-indole, 3-(N-phenyl-thiohydantoin)-indole, 3-(N-allyl-thiohydantoin)-indole, 5-methyl-brassinin, brassinin, brassilexin, β-carboline, 3-butyl-β-carboline, 6-fluoro-3-carbomethoxy-β-carboline, 6-isothiocyanate-3-carbomethoxy-β-carboline, 3-propoxy-β-carboline, 3-carboxy-β-carboline, 3-carbopropoxy-β-carboline, and 3-carbo-tert-butoxy-β-carboline; and

formula (II):  , wherein X, Y, and Z may be the same or different and are selected from the group consisting of H, halogen, NO_2, and hydrocarbyl; and

with the proviso that formula (II) does not include 3-amino-2-naphthoic acid.

6. The method of claim 5, wherein said at least one STI is selected from the group consisting of bcr/abl kinase inhibitors, epidermal growth factor (EGF) receptor inhibitors, her-2/neu receptor inhibitors, farnesyl transferase inhibitors (FTIs), inhibitors of Akt family kinases or the Akt pathway, and cell cycle kinase inhibitors.

7. The method of claim 6, wherein said at least one STI is selected from the group consisting of STI 571, SSI-774, C225, ABX-EGF, trastuzumab, L-744,832, rapamycin, LY294002, flavopiridal, and UNC-01.

8. The method of claim 7, wherein said at least one STI is L-744,832.

9. The method of claim 5, wherein said at least one IDO inhibitor and said at least one STI are administered concurrently.

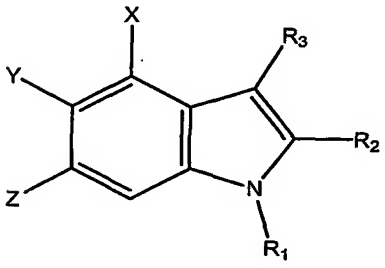
10. The method of claim 5, wherein said at least one IDO inhibitor and said at least one STI are administered sequentially.

11. The method of claim 10, wherein said at least one IDO inhibitor is administered before said at least one STI.

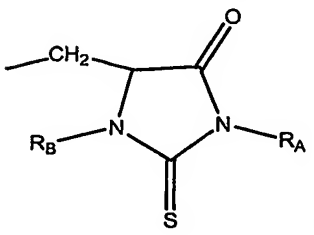
12. The method of claim 10, wherein said at least one STI is administered before said at least one IDO inhibitor.

13. The method of claim 5, wherein said cancer is selected from the group consisting of cancers of the prostate, colorectum, pancreas, cervix, stomach, endometrium, brain, liver, bladder, ovary, testis, head, neck, skin (including melanoma and basal carcinoma), mesothelial lining, white blood cell (including lymphoma and leukemia) esophagus, breast, muscle, connective tissue, lung (including small-cell lung carcinoma and non-small-cell carcinoma), adrenal gland, thyroid, kidney, or bone; glioblastoma, mesothelioma, renal cell carcinoma, gastric carcinoma, sarcoma, choriocarcinoma, cutaneous basocellular carcinoma, and testicular seminoma.

14. A pharmaceutical composition for the treatment of a cancer, said composition comprising an effective amount of at least one indoleamine 2,3-dioxygenase (IDO) inhibitor and at least one signal transduction inhibitor (STI) in a pharmaceutically acceptable carrier medium, wherein said at least one IDO inhibitor is selected from the group of compounds having the struture of formula (I):

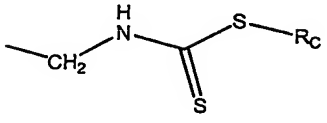


, wherein R_1 is H or lower alkyl; R_2 is H; R_3 is selected from the group consisting of:

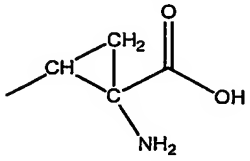


(a), wherein R_A and R_B are independently

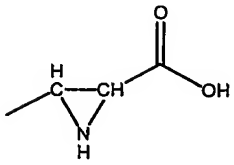
selected from the group of H and hydrocarbyl;



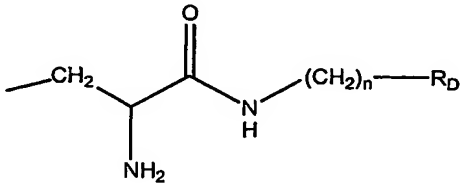
(b), wherein R_C is selected from the group of H and hydrocarbyl;



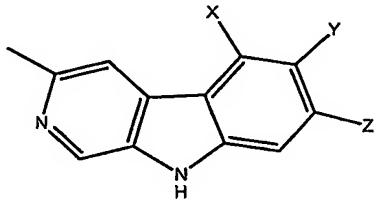
(c);



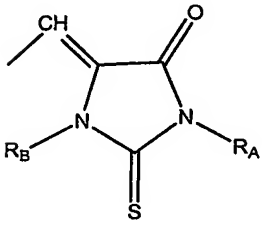
(d);



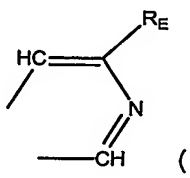
(e), wherein n is a whole number from 1 to 10 and R_D is a carboline substituent of the formula:



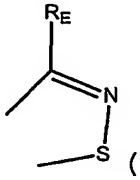
; and (f)



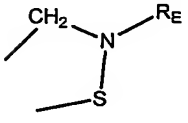
, wherein R_A and R_B are independently selected from the group of H and hydrocarbyl; or R_2 and R_3 are joined together and represent part of a ring which is fused to the pyrrole moiety of formula (I) and which is selected from the group of:



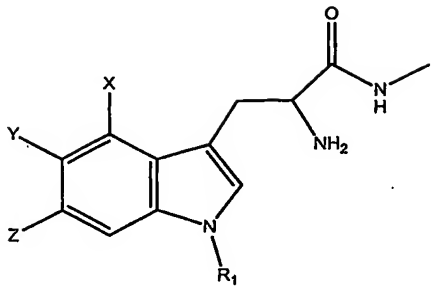
(i),



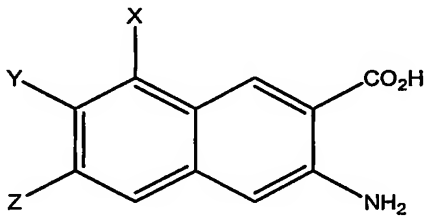
(ii), and



(iii), wherein R_E is a hydrocarbyl or alkyl-Q, Q representing a substituent of the formula:



, the compound of formula (I) being a β-carboline derivative when R_2 and R_3 joined together represent (i), a brassilexin derivative when R_2 and R_3 joined together represent (ii), and an N-substituted brassilexin derivative when R_2 and R_3 joined together represent (iii); X, Y, and Z may be the same or different and are selected from the group consisting of H, halogen, NO_2, and hydrocarbyl; and when R_2 and R_3 are joined together and represent part of a ring system, Y may also be isothiocyanate; with the proviso that formula (I) does not include a compound selected from the group of: 3-(N-methyl-thiohydantoin)-indole, 3-(N-phenyl-thiohydantoin)-indole, 3-(N-allyl-thiohydantoin)-indole, 5-methyl-brassinin, brassinin, brassilexin, β-carboline, 3-butyl-β-carboline, 6-fluoro-3-carbomethoxy-β-carboline, 6-isothiocyanate-3-carbomethoxy-β-carboline, 3-propoxy-β-carboline, 3-carboxy-β-carboline, 3-carbopropoxy-β-carboline, and 3-carbo-tert-butoxy-β-carboline; and

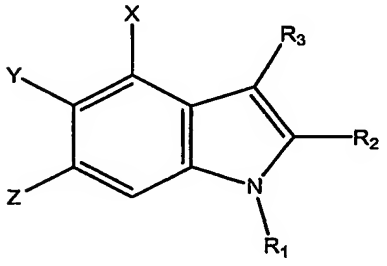
formula (II):  , wherein X, Y, and Z may be the same or different and are selected from the group consisting of H, halogen, NO_2, and hydrocarbyl; and with the proviso that formula (II) does not include 3-amino-2-naphthoic acid.

15. The pharmaceutical composition of claim 14, wherein said at least one STI is selected from the group consisting of bcr/abl kinase inhibitors, epidermal growth factor (EGF) receptor inhibitors, her-2/neu receptor inhibitors, farnesyl transferase inhibitors (FTIs), inhibitors of Akt family kinases or the Akt pathway, and cell cycle kinase inhibitors.

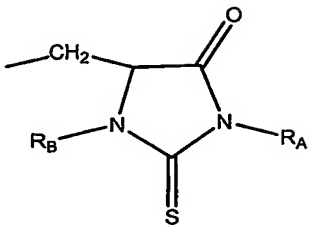
16. The pharmaceutical composition of claim 15, wherein said at least one STI is selected from the group consisting of STI 571, SSI-774, C225, ABX-EGF, trastuzumab, L-744,832, rapamycin, LY294002, flavopiridal, and UNC-01.

17. The pharmaceutical composition of claim 16, wherein said at least one STI is L-744,832.

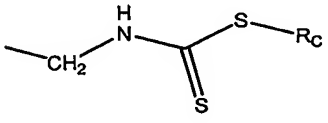
18. A method for treating a chronic viral infection in a patient in need thereof comprising administering to said patient, concurrently or sequentially, an effective amount of at least one indoleamine 2,3-dioxygenase (IDO) inhibitor and at least one chemotherapeutic agent, wherein said at least one IDO inhibitor is selected from the group of compounds having the formula of formula (I):



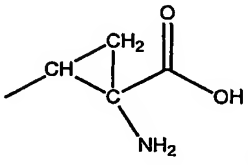
, wherein R_1 is H or lower alkyl; R_2 is H; R_3 is selected from the group consisting of:



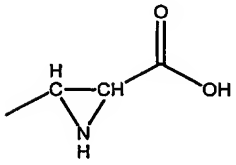
(a), wherein R_A and R_B are independently selected from the group of H and hydrocarbyl;



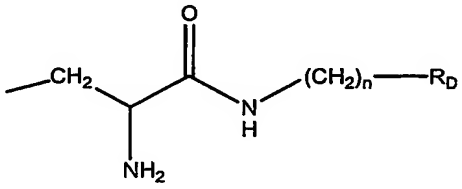
(b), wherein R_C is selected from the group of H and hydrocarbyl;



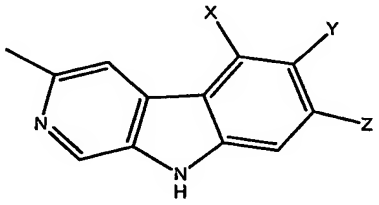
(c);



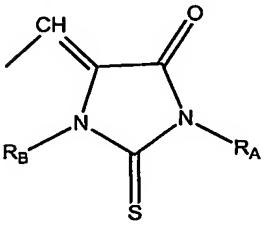
(d);



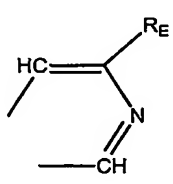
(e), wherein n is a whole number from 1 to 10 and R_D is a carboline substituent of the formula:



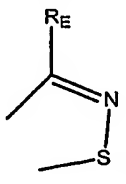
; and (f)



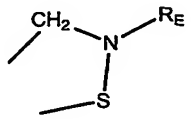
, wherein R_A and R_B are independently selected from the group of H and hydrocarbyl; or R_2 and R_3 are joined together and represent part of a ring which is fused to the pyrrole moiety of formula (I) and which is selected from the group of:



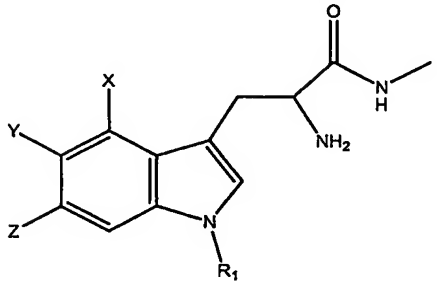
(i),



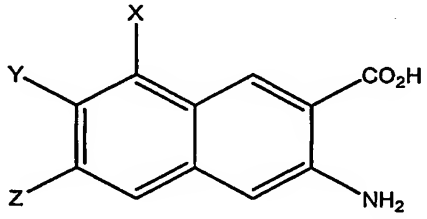
(ii), and



(iii), wherein R_E is a hydrocarbyl or alkyl-Q, Q representing a substituent of the formula:



, the compound of formula (I) being a β-carboline derivative when R_2 and R_3 joined together represent (i), a brassilexin derivative when R_2 and R_3 joined together represent (ii), and an N-substituted brassilexin derivative when R_2 and R_3 joined together represent (iii); X, Y, and Z may be the same or different and are selected from the group consisting of H, halogen, NO_2, and hydrocarbyl; and when R_2 and R_3 are joined together and represent part of a ring system, Y may also be isothiocyanate; with the proviso that formula (I) does not include a compound selected from the group of: 3-(N-methyl-thiohydantoin)-indole, 3-(N-phenyl-thiohydantoin)-indole, 3-(N-allyl-thiohydantoin)-indole, 5-methyl-brassinin, brassinin, brassilexin, β-carboline, 3-butyl-β-carboline, 6-fluoro-3-carbomethoxy-β-carboline, 6-isothiocyanate-3-carbomethoxy-β-carboline, 3-propoxy-β-carboline, 3-carboxy-β-carboline, 3-carbopropoxy-β-carboline, and 3-carbo-tert-butoxy-β-carboline; and

formula (II):  , wherein X, Y, and Z may be the same or different and are selected from the group consisting of H, halogen, NO_2, and hydrocarbyl; and

with the proviso that formula (II) does not include 3-amino-2-naphthoic acid.

19. The method of claim 18, wherein said at least one chemotherapeutic agent is selected from the group consisting of paclitaxel (Taxol®), cisplatin, docetaxol, carboplatin, vincristine, vinblastine, methotrexate, cyclophosphamide, CPT-11, 5-fluorouracil (5-FU), gemcitabine, estramustine, carmustine, adriamycin (doxorubicin), etoposide, arsenic trioxide, irinotecan, and epothilone derivatives.

20. The method of claim 18, wherein said at least one IDO inhibitor and said at least one chemotherapeutic agent are administered concurrently.

21. The method of claim 18, wherein said at least one IDO inhibitor and said at least one chemotherapeutic agent are administered sequentially.

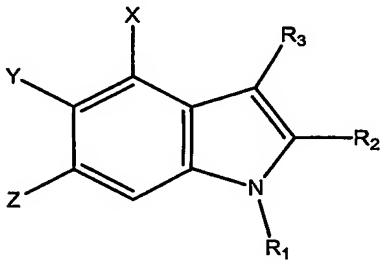
22. The method of claim 21, wherein said at least one IDO inhibitor is administered before said at least one chemotherapeutic agent.

23. The method of claim 21, wherein said at least one chemotherapeutic agent is administered before said at least one IDO inhibitor.

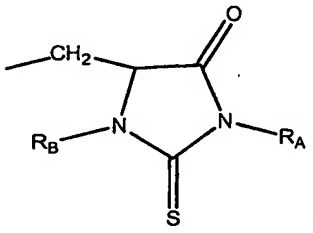
24. The method of claim 18, wherein said chronic viral infection is selected from the group consisting of: hepatitis C virus (HCV), human papilloma virus (HPV), cytomegalovirus (CMV), Epstein-Barr virus (EBV),

varicella zoster virus, coxsackie virus, human immunodeficiency virus (HIV).

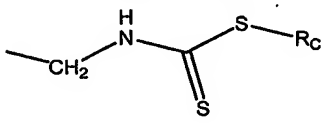
25. A pharmaceutical composition for the treatment of a chronic viral infection, said composition comprising an effective amount of at least one indoleamine 2,3-dioxygenase (IDO) inhibitor and at least one chemotherapeutic agent in a pharmaceutically acceptable carrier medium, wherein said at least one IDO inhibitor is selected from the group of compounds having the formula of formula (I):



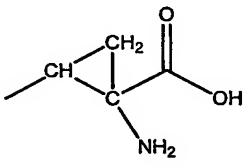
, wherein R_1 is H or lower alkyl; R_2 is H; R_3 is selected from the group consisting of:



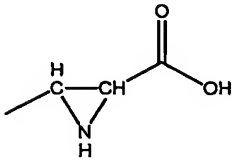
(a), wherein R_A and R_B are independently selected from the group of H and hydrocarbyl;



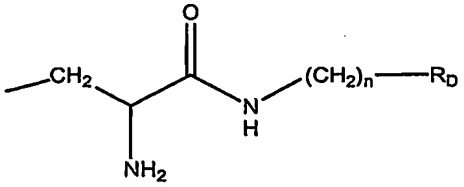
(b), wherein R_C is selected from the group of H and hydrocarbyl;



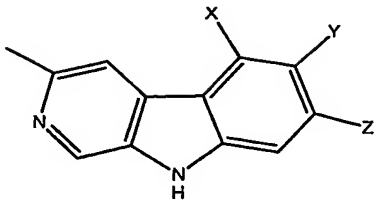
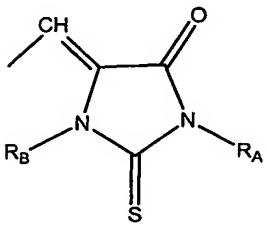
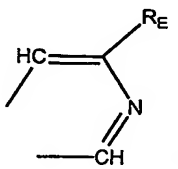
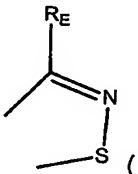
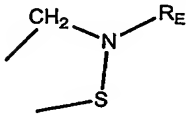
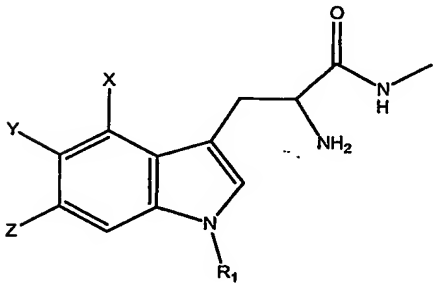
(c);



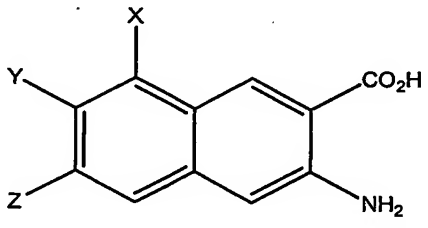
(d);



(e), wherein n

is a whole number from 1 to 10 and R_D is a carboline substituent of the formula:  ; and (f)  , wherein R_A and R_B are independently selected from the group of H and hydrocarbyl; or R_2 and R_3 are joined together and represent part of a ring which is fused to the pyrrole moiety of formula (I) and which is selected from the group of:  (i),  (ii), and  (iii), wherein R_E is a hydrocarbyl or alkyl-Q, Q representing a substituent of the formula:  , the compound of formula (I) being a β-carboline derivative when R_2 and R_3 joined together represent (i), a brassilexin derivative when R_2 and R_3 joined together represent (ii), and an N-substituted brassilexin derivative when R_2 and R_3 joined together represent (iii); X, Y, and Z may be the same or different and are selected from the group consisting of H, halogen, NO_2, and hydrocarbyl; and when R_2 and R_3 are joined

together and represent part of a ring system, Y may also be isothiocyanate; with the proviso that formula (I) does not include a compound selected from the group of: 3-(N-methyl-thiohydantoin)-indole, 3-(N-phenyl-thiohydantoin)-indole, 3-(N-allyl-thiohydantoin)-indole, 5-methyl-brassinin, brassinin, brassilexin, β-carboline, 3-butyl-β-carboline, 6-fluoro-3-carbomethoxy-β-carboline, 6-isothiocyanate-3-carbomethoxy-β-carboline, 3-propoxy-β-carboline, 3-carboxy-β-carboline, 3-carbopropoxy-β-carboline, and 3-carbo-tert-butoxy-β-carboline; and

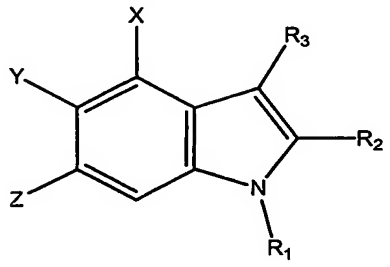


formula (II): , wherein X, Y, and Z may be the same or different and are selected from the group consisting of H, halogen, NO_2, and hydrocarbyl; and with the proviso that formula (II) does not include 3-amino-2-naphthoic acid.

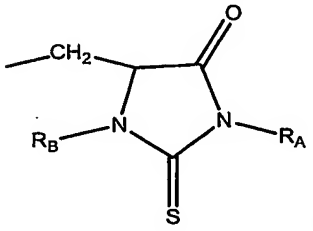
26. The composition of claim 25, wherein said at least one chemotherapeutic agent is selected from the group consisting of paclitaxel (Taxol®), cisplatin, docetaxol, carboplatin, vincristine, vinblastine, methotrexate, cyclophosphamide, CPT-11, 5-fluorouracil (5-FU), gemcitabine, estramustine, carmustine, adriamycin (doxorubicin), etoposide, arsenic trioxide, irinotecan, and epothilone derivatives.

27. A method for treating a cancer in a patient in need thereof comprising administering to said patient, concurrently or sequentially, an effective amount of at least one indoleamine 2,3-dioxygenase (IDO) inhibitor and at least one chemotherapeutic agents, wherein said at

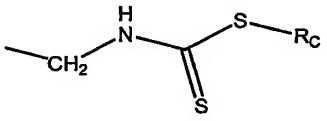
least one IDO inhibitor is selected from the group of compounds having the formula of formula (I):



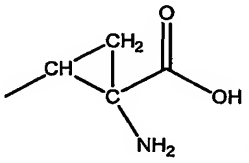
, wherein R_1 is H or lower alkyl; R_2 is H; R_3 is selected from the group consisting of:



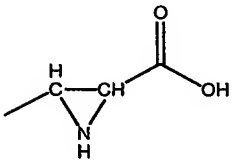
(a), wherein R_A and R_B are independently selected from the group of H and hydrocarbyl;



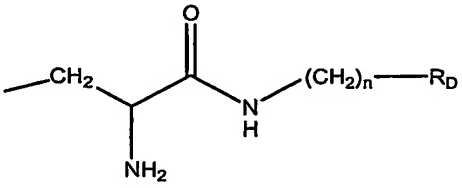
(b), wherein R_C is selected from the group of H and hydrocarbyl;



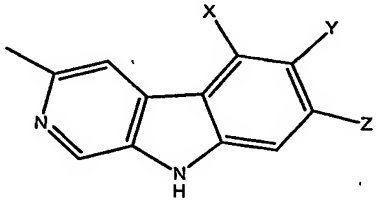
(c);



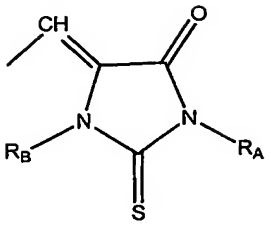
(d);

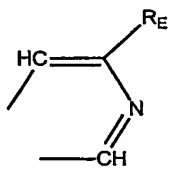
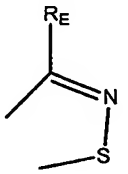
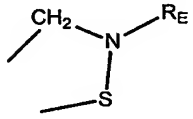


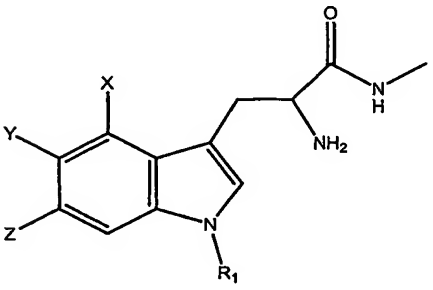
(e), wherein n is a whole number from 1 to 10 and R_D is a carboline substituent of the formula:



; and (f)

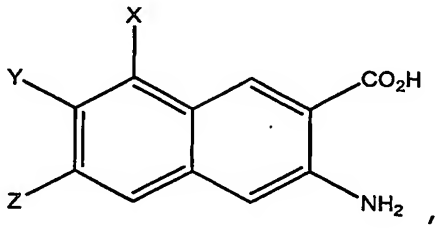


, wherein R_A and R_B are independently selected from the group of H and hydrocarbyl; or R_2 and R_3 are joined together and represent part of a ring which is fused to the pyrrole moiety of formula (I) and which is selected from the group of:  (i),  (ii), and  (iii), wherein R_E is a hydrocarbyl or alkyl-Q, Q representing a substituent of the formula:



, the compound of formula (I) being a β-carboline derivative when R_2 and R_3 joined together represent (i), a brassilexin derivative when R_2 and R_3 joined together represent (ii), and an N-substituted brassilexin derivative when R_2 and R_3 joined together represent (iii); X, Y, and Z may be the same or different and are selected from the group consisting of H, halogen, NO_2, and hydrocarbyl; and when R_2 and R_3 are joined together and represent part of a ring system, Y may also be isothiocyanate; with the proviso that formula (I) does not include a compound selected from the group of: 3-(N-methyl-thiohydantoin)-indole, 3-(N-phenyl-thiohydantoin)-indole, 3-(N-allyl-thiohydantoin)-indole, 5-methyl-brassinin, brassinin, brassilexin, β-carboline, 3-butyl-

β-carboline, 6-fluoro-3-carbomethoxy-β-carboline, 6-isothiocyanate-3-carbomethoxy-β-carboline, 3-propoxy-β-carboline, 3-carboxy-β-carboline, 3-carbopropoxy-β-carboline, and 3-carbo-tert-butoxy-β-carboline; and



formula (II): , wherein X, Y, and Z may be the same or different and are selected from the group consisting of H, halogen, NO_2, and hydrocarbyl; and with the proviso that formula (II) does not include 3-amino-2-naphthoic acid.

28. The method of claim 27, wherein said at least one chemotherapeutic agent is selected from the group consisting of paclitaxel (Taxol®), cisplatin, docetaxol, carboplatin, vincristine, vinblastine, methotrexate, cyclophosphamide, CPT-11, 5-fluorouracil (5-FU), gemcitabine, estramustine, carmustine, adriamycin (doxorubicin), etoposide, arsenic trioxide, irinotecan, and epothilone derivatives.

29. The method of claim 28, wherein said at least one chemotherapeutic agent is paclitaxel.

30. The method of claim 27, wherein said at least one IDO inhibitor and said at least one chemotherapeutic agent are administered concurrently.

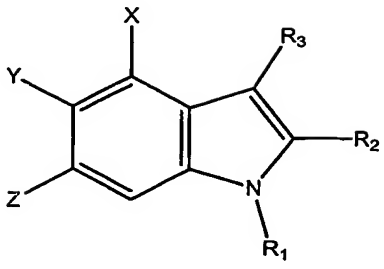
31. The method of claim 27, wherein said at least one IDO inhibitor and said at least one chemotherapeutic agent are administered sequentially.

32. The method of claim 31, wherein said at least one IDO inhibitor is administered before said at least one chemotherapeutic agent.

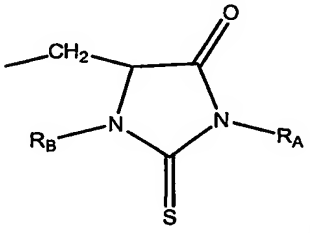
33. The method of claim 31, wherein said at least one chemotherapeutic agent is administered before said at least one IDO inhibitor.

34. The method of claim 27, wherein said cancer is selected from the group consisting of cancers of the prostate, colorectum, pancreas, cervix, stomach, endometrium, brain, liver, bladder, ovary, testis, head, neck, skin (including melanoma and basal carcinoma), mesothelial lining, white blood cell (including lymphoma and leukemia) esophagus, breast, muscle, connective tissue, lung (including small-cell lung carcinoma and non-small-cell carcinoma), adrenal gland, thyroid, kidney, or bone; glioblastoma, mesothelioma, renal cell carcinoma, gastric carcinoma, sarcoma, choriocarcinoma, cutaneous basocellular carcinoma, and testicular seminoma.

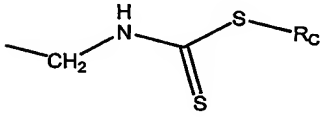
35. A pharmaceutical composition for the treatment of a cancer, said composition comprising an effective amount of at least one indoleamine 2,3-dioxygenase (IDO) inhibitor and at least one chemotherapeutic agent in a pharmaceutically acceptable carrier medium, wherein said at least one IDO inhibitor is selected from the group of compounds having the structure of formula (I):



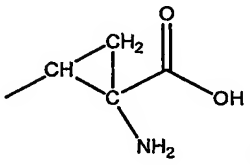
, wherein R_1 is H or lower alkyl; R_2 is H; R_3 is selected from the group consisting of:



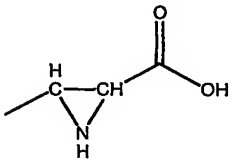
(a), wherein R_A and R_B are independently selected from the group of H and hydrocarbyl;



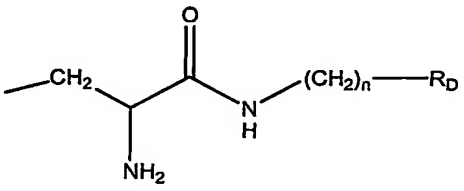
(b), wherein R_C is selected from the group of H and hydrocarbyl;



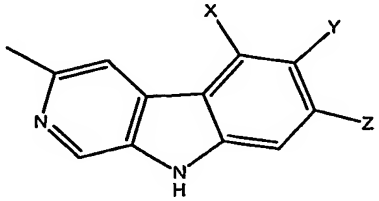
(c);



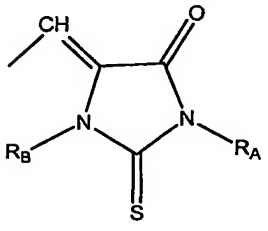
(d);



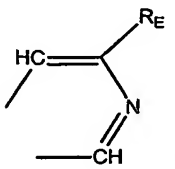
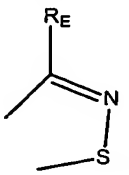
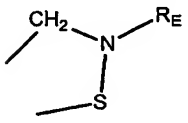
(e), wherein n is a whole number from 1 to 10 and R_D is a carboline substituent of the formula:

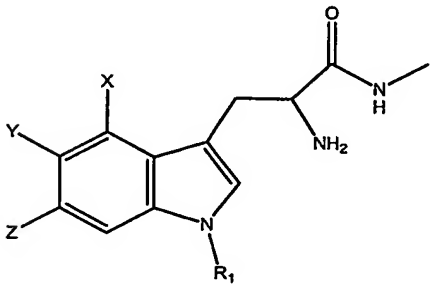


; and (f)

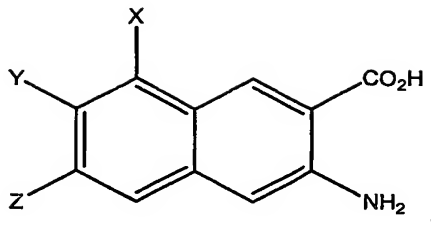


, wherein R_A and R_B are independently selected from the group of H and hydrocarbyl; or R_2 and R_3

are joined together and represent part of a ring which is fused to the pyrrole moiety of formula (I) and which is selected from the group of:  (i),  (ii), and  (iii), wherein R_E is a hydrocarbyl or alkyl-Q, Q representing a substituent of the formula:



, the compound of formula (I) being a β-carboline derivative when R_2 and R_3 joined together represent (i), a brassilexin derivative when R_2 and R_3 joined together represent (ii), and an N-substituted brassilexin derivative when R_2 and R_3 joined together represent (iii); X, Y, and Z may be the same or different and are selected from the group consisting of H, halogen, NO_2, and hydrocarbyl; and when R_2 and R_3 are joined together and represent part of a ring system, Y may also be isothiocyanate; with the proviso that formula (I) does not include a compound selected from the group of: 3-(N-methyl-thiohydantoin)-indole, 3-(N-phenyl-thiohydantoin)-indole, 3-(N-allyl-thiohydantoin)-indole, 5-methyl-brassinin, brassinin, brassilexin, β-carboline, 3-butyl-β-carboline, 6-fluoro-3-carbomethoxy-β-carboline, 6-isothiocyanate-3-carbomethoxy-β-carboline, 3-propoxy-β-carboline, 3-carboxy-β-carboline, 3-carbopropoxy-β-carboline, and 3-carbo-tert-butoxy-β-carboline; and

formula (II):  , wherein X, Y, and Z may be the same or different and are selected from the group consisting of H, halogen, NO_2, and hydrocarbyl; and with the proviso that formula (II) does not include 3-amino-2-naphthoic acid.

36. The pharmaceutical composition of claim 14, wherein said at least one chemotherapeutic agent is selected from the group consisting of paclitaxel (Taxol®), cisplatin, docetaxol, carboplatin, vincristine, vinblastine, methotrexate, cyclophosphamide, CPT-11, 5-fluorouracil (5-FU), gemcitabine, estramustine, carmustine, adriamycin (doxorubicin), etoposide, arsenic trioxide, irinotecan, and epothilone derivatives.

37. The pharmaceutical composition of claim 15, wherein said at least one chemotherapeutic agent is paclitaxel.